Society for Endocrinology

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THE ENDOCRINOLOGIST

THE MAGAZINE OF THE SOCIETY FOR ENDOCRINOLOGY

A career in endocrinology
REACH YOUR POTENTIAL

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A word from THE GUEST EDITOR...

Engaging fully with the theme of this issue – supporting the next generation of endocrinologists – our Editor has generously ceded these opening words to me. Whether you're a trainee clinician or scientist, or indeed trainee clinician scientist, I hope you'll find some useful advice here. If you're at a more advanced career stage, I hope this issue will motivate you to continue encouraging and nurturing junior colleagues and colleagues-to-be.

For those pursuing research, Matthew Sinton and Kim Jonas provide tips on choosing a PhD and securing funding respectively. Relevant to all of us are Jackie Maybin's brilliant suggestions on putting together a CV. Clinical training in all fields has its challenges and myself and Helen Simpson issue a call to arms to ensure we maintain strong recruitment to endocrinology and diabetes programmes. Alison Montgomery shares both her findings from a study of less than full time working and her personal, positive experience. Remember that the Society can be a great source of early career support; Ed Olaniru tells us about the Early Career Steering Group and supervisors and students tell us what the Summer Studentship scheme has meant to them.

There's plenty of inspiration to be taken here too. The Early Career Prize Lecturers Douglas Gibson and Julia Prague share their research, whilst Shazia Hussain and colleagues from Barts show us how to enthuse junior clinicians. Alison Milne, Endocrine Nurse Award winner, highlights the importance of passion for your work. Finally, the inaugural recipients of the Society's Leadership and Development Awards Programme are unveiled – please join the Editorial Board in warmly congratulating them.

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www.endocrinology.org/endocrinologist

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Become a contributor... Contact the Editorial office at **endocrinologist@endocrinology.org**

The Society welcomes news items, contributions, article suggestions and letters to the Editor. We would also like to hear your feedback on this issue of the magazine.
Deadline for news items for the Winter 2019 issue: **2 October 2019**.

Front cover image ©Shutterstock

LET US BOOST YOUR CAREER

Don't miss the approaching deadlines for Society grants, which are available to help fund your research, travel or lab equipment.

- A **Practical Skills Grant** will help you forge new collaborations or learn skills by funding a visit to another institution or attendance at a workshop: apply by 30 October.
- **Early Career Grants** provide financial support to boost your research: apply by 20 November.
- An **Equipment Grant** could buy vital equipment for your lab: apply by 20 November.
- **Endocrine Nurse Grants** help fund projects that enhance nursing clinical practice: apply by 20 November.
- A **Travel Grant** will help you meet and engage with the endocrine community worldwide: apply by 4 December.

You can find full details of how to apply, and more Society funding opportunities, at **www.endocrinology.org/grants-and-awards**.

OUR 2019 EARLY CAREER PRIZE LECTURERS

We congratulate our Early Career Prize Lecturers **Inês Cebola** from Imperial College London, for her abstract entitled '*Unravelling new type 2 diabetes regulatory links with 3D chromatin topology analysis and CRISPR/Cas9 perturbations*', and **Ana Tiganescu** from the University of Leeds, for her abstract entitled '*From bench to bedside (and beyond) – a novel therapy to improve wound healing in type 2 diabetes*'.

Both winners will present their lectures at SfE BES 2019 in Brighton, on 11–13 November.

JOIN *THE ENDOCRINOLOGIST'S* EDITORIAL BOARD

Help develop your Society's magazine for members, whilst gaining editorial experience. We want to hear from basic scientists, clinicians and nurses, at any career stage, who have a passion for communicating endocrinology. Come and join our team, starting in late 2019.

If you are interested, or would like to find out more, email **media@endocrinology.org** before **31 October 2019**.

HELP IMPROVE SCIENCE REPORTING IN THE MEDIA

Become a Society Media Ambassador and share your expertise to improve accuracy in media coverage of endocrine-related topics. Find out more **www.endocrinology.org/outreach/public-engagement**.

A BETTER WAY TO SHARE BEST PRACTICE

With our online platform, SfE Connect, it is now even easier for you to share the latest information and best practice with our endocrine community. Simply select the 'Best practice' category when you post, to develop an essential online repository of leaflets, protocols, guidelines and other relevant information for Society members. Learn more at **www.endocrinology.org/membership/endocrine-networks/join-sfe-connect**.

ENDOCRINE NURSE AWARD WINNER 2020

We congratulate **Sherwin Criseno**, Advanced Nurse Practitioner/Lead Nurse Endocrinology at University Hospitals Birmingham NHS Trust, who is the winner of the Society's Endocrine Nurse Award for 2020. Sherwin will give a presentation at Endocrine Nurse Update 2020 which is taking place in Birmingham on 20–21 April.

Sherwin Criseno

DON'T MISS THE SOCIETY'S LATEST BLOG POSTS

Visit The Endocrine Post at **www.endocrinologyblog.org** for the latest news, views and interviews with leading endocrinologists.

Are you interested in contributing? Contact **media@endocrinology.org** to find out more.

WITH REGRET

We are sorry to announce the death of **Professor Ian Henderson** (Sheffield), a Senior Member and former Chairman of the Society. A full obituary will appear in the next issue of *The Endocrinologist*.

SOCIETY CALENDAR

28 September 2019
NATIONAL ENDOCRINOLOGY AND DIABETES TASTER
Newcastle upon Tyne, UK

11–13 November 2019
SfE BES 2019
Brighton, UK

12 March 2020
NATIONAL CLINICAL CASES
London, UK

ENDOCRINE ACADEMY:

20–22 April 2020
CLINICAL UPDATE
Birmingham, UK

20–21 April 2020
ENDOCRINE NURSE UPDATE
Birmingham, UK

20–22 April 2020
CAREER DEVELOPMENT WORKSHOP
Birmingham, UK

15–17 November 2020
SfE BES 2020
Harrogate, UK

www.endocrinology.org/events for full details

GRANT AND PRIZE DEADLINES

25 September 2019
PUBLIC ENGAGEMENT GRANTS

30 October 2019
PRACTICAL SKILLS GRANTS

20 November 2019
EARLY CAREER GRANTS

20 November 2019
EQUIPMENT GRANTS

20 November 2019
ENDOCRINE NURSE GRANTS

4 December 2019
TRAVEL GRANTS

Ongoing
ENDOCRINE NETWORK GRANTS

www.endocrinology.org/grants-and-awards for full details of all Society grants and prizes

HOT TOPICS

SOCIETY FOR ENDOCRINOLOGY OFFICIAL JOURNALS

Society members have free access to the current content of *Journal of Endocrinology, Journal of Molecular Endocrinology, Endocrine-Related Cancer* and *Clinical Endocrinology* via the members' area on the Society home page, **www.endocrinology.org**. *Endocrine Connections* and *Endocrinology, Diabetes & Metabolism Case Reports*, the Society-endorsed case reports publication, are open access and free to all.

JOURNAL OF ENDOCRINOLOGY

Prenatal caffeine and glucocorticoid–IGF1 axis-mediated testicular dysplasia

The negative effects of prenatal caffeine exposure (PCE) in relation to testicular development via intrauterine growth retardation are well known. However, the underlying mechanism was not understood.

Pei *et al.* investigated the effects of low and high dose (30 and 120 mg/kg per day) exposure to caffeine in pregnant rats (intragastric administration from gestational day 9 to 20). *In vivo* findings showed that high dose PCE resulted in testicular dysplasia and dysfunction in male fetuses, with increased serum corticosterone and decreased insulin-like growth factor 1 (*Igf1*) expression and histone-3 lysine-14 acetylation (H3K14ac) at its promoter region. After birth, the serum corticosterone concentration gradually decreased in the PCE (120 mg/kg per day) offspring, whereas the expression and H3K14ac level of *Igf1* gradually increased, with obvious catch-up growth and testicular development compensation. *In vitro* studies suggested that the effects of caffeine on *Igf1* expression were indirect and caused via elevated corticosteroid exposure rather than caffeine.

Understanding an underlying mechanism of PCE-induced testicular dysfunction via the glucocorticoid–IGF1 axis may help prevent and treat testicular development abnormalities in the future.

Read the full article in *Journal of Endocrinology* **242** M17–M32


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JOURNAL OF MOLECULAR ENDOCRINOLOGY

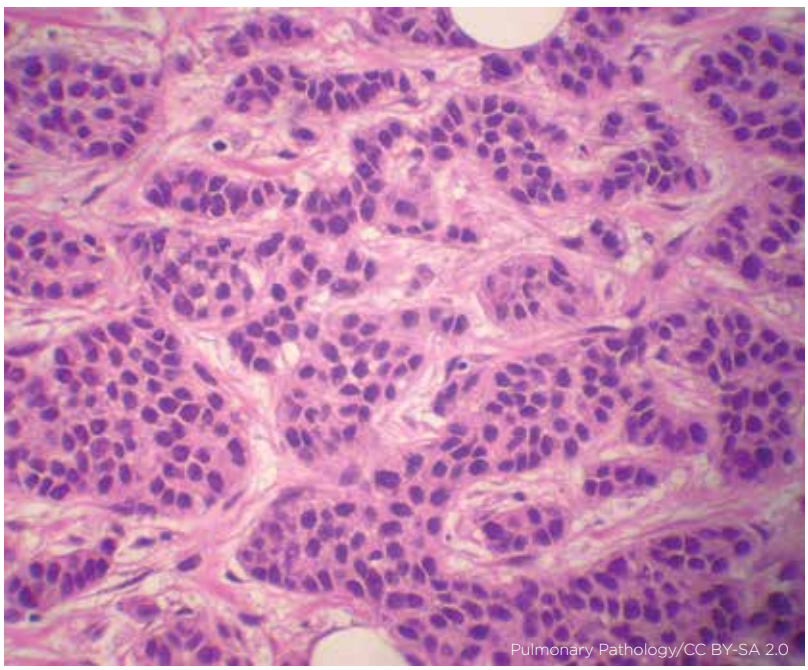
Glucose-dependent expression of GPER1 affects tamoxifen response

Non-classical oestrogen signalling, via the G protein-coupled oestrogen receptor GPER1, has recently been identified. GPER1 has a role in modulating oestradiol-responsive tissues and cancers, and the GPER1-dependent mechanism of tamoxifen action in breast cancer cells underscores the importance of identifying mechanisms that regulate its expression.

Given the loss of metabolic homeostasis in GPER1 knockout mice, Zheng *et al.* investigated whether GPER1 expression was sensitive to changes in D-glucose availability in MCF-7 and T-47D breast cancer cell lines. In both, GPER1 expression was inversely related to D-glucose availability. Increased expression of GPER1 was associated with increased AMP-activated protein kinase (AMPK) activation. Inhibition of AMPK with dorsomorphin decreased GPER1 expression, while activation of AMPK with 5-aminoimidazole-4-carboxamide ribonucleotide increased it. Notably, D-glucose deprivation enhanced the tamoxifen responsiveness of breast cancer cell lines; this effect was abrogated by co-incubation with the selective GPER1 antagonist G36.

This study increases understanding of D-glucose's contribution as a determinant of GPER1 expression in breast cancer cells. Patients' blood glucose levels may alter efficacy of tamoxifen treatment. Further studies are needed to better understand how this interaction could affect stratified treatment of breast cancer patients.

Read the full article in *Journal of Molecular Endocrinology* **63** 103–112


Pulmonary Pathology/CC BY-SA 2.0

Hot Topics is written by Douglas Gibson, David Hope, Louise Hunter and Helen Simpson.

CLINICAL ENDOCRINOLOGY

Reproductive potential and fertility preservation techniques in DSD

This systematic literature review by Islam *et al.* explores the potential for fertility among XY patients with differences in sex development (DSD). While much work has studied the fertility potential of young patients undergoing cancer treatment, there has been an assumption that fertility is less important for those with DSD.

The authors have examined original research articles and relevant reviews between 1974 and 2018 that address DSD and fertility, *in vitro* maturation of sperm, and histological/ultrastructural assessment of gonadal tissue in complete and partial androgen insensitivity syndrome, 17β-hydroxysteroid dehydrogenase type 3 and 5α-reductase deficiency.

Successful clinical outcomes from ovarian tissue cryopreservation have led to similar research being conducted using testicular tissue and sperm. Cryopreservation of testicular tissue is now offered to boys before cancer treatment. Although data are limited, there is evidence to suggest the presence of reproductive potential in the gonads of some individuals with DSD. As this research progresses, and if results are encouraging, then individuals with DSD should be given the same information, opportunities and access to fertility preservation as other patient groups.

Read the full article in *Clinical Endocrinology* **91** 237–244

ENDOCRINOLOGY, DIABETES & METABOLISM CASE REPORTS

An unusual cause of gynaecomastia in a male

Gynaecomastia, the benign proliferation of breast glandular tissue in men is typically caused by an absolute or relative imbalance of oestrogen and androgen effects. Not only does gynaecomastia result in local symptoms, it can cause significant psychological burden. In addition to oestrogen and androgen receptors, breast tissue also expresses receptors for luteinising hormone (LH), human chorionic gonadotrophin (hCG), prolactin, progesterone and insulin-like growth factor (IGF). Several aetiologies are known with endocrine tumours, an important cause of gynaecomastia which needs to be considered.

Rehman and colleagues report a 50-year-old man who presented to their clinic with a 3-month history of painful bilateral gynaecomastia. He had a normal testicular examination. Initial biochemistry showed undetectable follicle stimulating hormone and LH with elevated total testosterone and oestradiol. hCG was found to be high and serial testing demonstrated a progressive rise in hCG levels over 4 months. Positron emission tomography 18F-FDG PET/CT whole body imaging revealed a lesion in the anterior mediastinum and a lung deposit.

Following successful biopsy of the mediastinal lesion, the authors undertook histological examination confirming a diagnosis of a primary mediastinal choriocarcinoma, prior to successful combination chemotherapy treatment with surgical resection of both primary and pulmonary metastasis. The patient remains in remission at 3 years and ran the London marathon this year.

The authors comment on choriocarcinomas and explanations for their origin. The case highlights the importance of a thorough biochemical assessment in presenting cases of gynaecomastia, in this case caused by suspected hCG-driven aromatisation of testosterone and hCG receptor homology from an endocrine tumour. Furthermore, early diagnosis and management for this highly aggressive tumour is paramount to ensure the best outcome, as achieved in this case.

Read the full article in *Endocrinology, Diabetes & Metabolism Case Reports* EDM-19-0060

ENDOCRINE CONNECTIONS

Grip strength and lean body mass after hormone treatment in trans people

Gender-affirming hormonal treatment in trans people changes physical appearance but also alters body composition. In a study by Scharff *et al.*, the time course of changes in grip strength, lean body mass and bone mineral density were assessed in trans people during the first year of hormone treatment.

This multi-centre prospective cohort study was part of the European Network for the Investigation of Gender Incongruence. It included 249 transwomen, who received oestradiol, and 278 transmen, who received testosterone. After 1 year of hormone treatment, grip strength was decreased in transwomen. In transmen, grip strength increased over baseline, and this was associated with increased lean body mass. Changes in grip strength were not associated with a change in bone mineral density in either transwomen or transmen.

These insights into changes in grip strength that occur over time may be of relevance for the management of prevention of sarcopenia (the age-related loss of muscle mass) and dynapenia (the age-related loss of muscle strength) in trans people.

Read the full article in *Endocrine Connections* **8** 1020–1028

ENDOCRINE HIGHLIGHTS

A summary of papers from around the endocrine community that have got you talking.

Transgenerational effects of endocrine-disrupting chemicals on reproduction

Endocrine-disrupting chemicals (EDCs) are known to adversely affect male and female fertility. However, it has only recently been discovered that they may have transgenerational effects on reproductive capability, as Brehm *et al.* summarise in this review.

Humans are exposed to EDCs every day, as a result of the presence of these compounds in plastics, personal care products and pesticides. In recent studies in male and female rodents, EDCs have been shown to have multigenerational and transgenerational effects on reproduction. In both sexes, transgenerational effects on fertility, puberty and reproductive organ size have been observed. Additionally, oestrous cyclicity, follicle number and litter size, alongside sperm number and sperm viability, were affected in females and males respectively.

The results discussed in this review give us an insight into the possible implications of EDCs for humans. They highlight the need for further studies, utilising experimental designs that reflect human daily exposure, for us to begin to understand the impact EDCs may have on reproduction across generations.

Read the full article in *Endocrinology* **160** 1421–1435

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THE PATH TO THE RIGHT PhD

WRITTEN BY MATTHEW SINTON

As scientists in training, we're taught to evaluate evidence, to develop and test hypotheses, and to be rational. Sometimes, though, you have to just trust that indefinable feeling in the pit of your stomach, that tells you whether you're making the right or wrong decision.

It's fair to say that my path to starting a PhD was not a particularly straight one. More like a long, circuitous, multi-oxbow-lake sort of path.

Although I began a PhD immediately after finishing my undergraduate degree, things did not go to plan. I decided to quit and meander along, figuring out life, until I realised that I desperately missed science. You see, I realised that I had been right to leave my PhD, but that it was because I had gone about selecting the project without giving it enough thought, or considering enough factors.

I was given a very vague outline of the project on offer, but heard the words 'cancer' and 'stem cells' and jumped at the opportunity to do research at a prestigious university. Sadly, I didn't have the experience, and I didn't receive the support to drive my project forwards. So off I went.

Although it took me several years (and an off-piste journey to become a science teacher … but that's a different story), I eventually found myself back in the lab, before being accepted onto a PhD programme. This time, I was determined to make the right choice and to make it work. The programme onto which I was accepted included a rotation year, to let us figure out where our interests lay. Unlike my first experience of a PhD, this time I had landed on my feet. I got to experience three fantastic projects with three great supervisors. So, what made the difference?

RESEARCHING THE RESEARCH

When I started to think about the different people that I could work with, I looked into what they were interested in, and read around the topics, to see if any of them caught my interest. I decided to contact people by email and ask if we could have a conversation about what they were researching and if they would be interested in taking on a rotation student. It meant that I was able to have multiple, really productive and super-interesting, conversations about science, and in particular about zebrafish, bone marrow adipose tissue, and epigenetics (not all with the same person, I might add).

It was a tricky decision in the end, because I could see myself working on any of the projects, so after weighing up my options, I trusted my gut instinct, for which I have ever since been grateful.

TOP TIPS

Whether a PhD is 4 years long with rotations or 3 years without, there are several things that I found extremely useful in order to pick the right project.

1. Have a conversation with your prospective supervisor
Drop them an email and tell them why you're interested in their work and see if they would be interested in having a chat, whether by Skype or in person. Discuss the project, the sorts of opportunities you'll receive, and what is expected of PhD students in the lab. If you think you need to, have a follow-up conversation too.

2. Have a conversation with your prospective lab mates
Most heads of labs will be happy for you to meet their lab group, and it's a great opportunity to dig a bit deeper, to get a feeling for the lab culture, and the level of supervision and mentorship provided.

3. Read up on the project
Having been in this position, I feel this is particularly important. If you think that you might be interested in a project, ask your prospective supervisor to recommend a couple of reviews. If you read them and they leave you cold, it's probably a sign that this area of research isn't for you. On the flip side, if you love them and want to find out more, then that's a great sign!

4. Assess the lab's experience
Does the lab have expertise in the project on offer, or is it an area that's new to them? Look at the topics they've been working on. It's not fun to end up in a lab that asks you to work on cancer stem cells to then find out that neither the lab nor anyone associated with it has ever worked on cancer or stem cells. It's great to work on a cutting-edge project, but make sure that the support and knowledge are available to you.

5. Lastly, trust your instinct
Picking the right PhD is hard and it takes a lot of time and effort, but it really does pay off. If you've really considered everything about a project and it sounds great, but something seems off, don't ignore it. Listen to your instinct, and take time to think more. Likewise, if your instincts are telling you that the project is perfect, take some time to make sure you've considered everything you can, but trust that feeling.

MATTHEW SINTON
PhD Student, Centre for Cardiovascular Science, Queens Medical Research Institute, University of Edinburgh

BUILDING YOUR CURRICULUM VITAE

WRITTEN BY JACQUELINE MAYBIN

The *Oxford English Dictionary* defines curriculum vitae as 'a brief account of a person's education, qualifications, and previous occupations'. The literal translation of the phrase from Latin is 'the course of your life'.

'Of these two descriptions, I personally prefer the latter, as I believe a really great CV not only summarises your achievements to date, but also conveys your future potential and aspirations. So how do you get a fantastic CV? There is no simple answer, but I've formulated eight tips that I've found helpful in my career so far.

THINK ABOUT THE BIG PICTURE

What impact do you want your life to have? What motivates you? What are you passionate about? However daunting, finding answers to these questions is essential. Only when you have passion for your subject can you excel in your chosen field. I have found it very useful to write down my 'big

picture aims' and refer back to these at various points in my career. It has helped me to be authentic, to manage my time and to maintain motivation. Granted, some of my overarching aims have changed and developed, but the core values remain the same.

KEEP YOUR EYE ON A PRIZE

So, now you have a clear vision of the mark you wish to make, where do you start? Only the most confident (or foolhardy?) are not overwhelmed by such lofty aims.

Find an intermediate and achievable goal. Most of us can imagine where we would like to be in 5 years' time. Perhaps it is to have a personal fellowship or a lecturer/senior lecturer position. Or maybe it's to have a career in science policy/communication or in industry. Whatever your aim, now is the time to work out what your future employer/grant panel would find desirable on your CV. That way you have 5 years to work on it.

Go on a fact-finding mission: phone grant advisory panels, read the application forms, speak to people who have your ideal job, seek advice from mentors, and put together a game plan. Make sure you can write something in each box of the application form. Find the gaps that are present at the moment and decide how best to fill them. Get insider information and see things from the other side: review papers, give feedback to students, sit in on grant panels. This will give you an understanding of the selection process that will be invaluable for your own applications.

REMEMBER THE BASICS

At a minimum, you will need to meet the essential criteria for any application. Without these, it is pointless working hard on desirable criteria. Ensure you have all the requirements. If not, incorporate these aims into an annual review of professional development in your current job. If you do not have a formalised review at your institution, ask for one with your line manager. Most employers support professional development; take advantage of courses/online resources to enhance your CV.

PUBLISH OR PERISH?

Most academic application forms will ask for a list of publications. If you have seven papers in *Nature* then list them but, if you don't, there is no need to panic.

There is no denying that publication is necessary to increase the visibility and validity of your work. It is important to show you can finish work and have it stand up to peer review. Be a finisher – finished is better than perfect – and in academia this means publish. However, the impact factor of the journal is less important.

Perhaps this job/fellowship/grant will be the one that generates novel scientific data and leads to a quality, high impact publication. Not having a stellar publication is seldom the downfall of an applicant – usually much more importance is placed on potential.

First author papers are great; they show that you can drive a project, write scientifically and deal with the whole publication process. Non-first author papers are desirable too – you need to show you can collaborate. Remember the African proverb 'If you want to go fast, go alone. If you want to go far, go together'.

BE DESIRABLE

Once the essential criteria are in the bag, work on desirable CV items. The advice of an internal and/or external mentor is invaluable. There are many formal schemes that can help form these relationships; use them if you feel you lack good mentors.

Apply for small local grants and starter grants. This is great practice for larger applications and shows you have the motivation, organisation and resilience to deal with the grant application process.

Get your work and name out there. Present at local, national and international conferences and have a professional presence online. Web pages, ORCID iD (**www.orcid.org**) and sites like ResearchGate (**www.researchgate.net**) are considered extensions to your CV. Google your name: the person reading your CV certainly will.

Network well (there are courses on how to do this) and take part in public engagement. Funders are big on public engagement, so employers are too. The lay summary on grant applications is often what makes or breaks an application, particularly funding from charities. If you can clearly communicate your work to the public, you are an attractive employee/grant recipient.

Embrace your imposter syndrome. We are trained to question and apply scientific rigour in our work, so we will naturally do this to ourselves. Do not let imposter syndrome hold you back. Apply for prizes, don't be scared of failure and enjoy the successes. There are plenty of prizes out there, especially for early career researchers, and they will form the icing on your CV cake.

FORTUNE FAVOURS THE BRAVE

The best moments in my career have usually been the ones I have feared the most. Go outside your comfort zone. Push the boundaries. Move laboratories, institutions, countries and/or areas of interest. Learn a new technique or collaborate outside biomedical science. This is when you learn and develop, and this is very clear and very attractive on a CV.

BE KIND

No one wants to work with someone who is difficult. Collaborate to help drive science forward. An attractive part of obtaining senior positions is involvement in the development of the next generation. Teach, mentor and develop your team and colleagues. Don't kick the ladder behind you. These skills have traditionally been undervalued, but are now high on the priority list on a CV. Make sure you have them, for your CV and for your conscience.

MAKE IT CLEAR

Take time to ensure your CV layout and presentation are professional, clear and accurate. Follow the format requested. Eliminate errors in spelling and grammar. Make sure there are no rogue apostrophes (it is GCSEs, not GCSE's), eliminate Americanisms (unless you are applying there) and utilise spell checking.

A flawless CV will show you have attention to detail: an essential quality in a scientist. Be concise. Be more Orwell: 'Never use a long word where a short one will do' and 'If it is possible to cut a word out, always cut it out'.

Succinctly show you are the best candidate for the position. If asked for a cover letter, use this to show what attributes you can bring to this specific position. Align this with the institution's mission statements. Do not just rehash your CV.

Finally, swallow your embarrassment, silence your imposter syndrome and get feedback. Ask your mentors, a trusted colleague and an intelligent, non-scientific family member/friend to read and critique your CV. After all, feedback is the food of champions.

JACQUELINE MAYBIN
Senior Research Fellow and Honorary Consultant Gynaecologist, MRC Centre for Reproductive Health, University of Edinburgh

THE EARLY CAREER STEERING GROUP: SPEAKING FROM EXPERIENCE

WRITTEN BY OLADAPO EDWARD OLANIRU

I became aware of the Society for Endocrinology 2 years into my PhD, when my supervisor, Shanta Persaud, suggested that I should apply to become a Student Ambassador. I took on this role at King's College London from 2015 to 2016, and led a membership campaign.

I subsequently attended the Society for Endocrinology Career Development Workshop in 2016, which involved writing and defending a mock research grant proposal in 1 day, under the guidance of a mentor. That motivated me to apply for the Society for Endocrinology Early Career Grant, which I was awarded in 2017.

Those experiences suggested a Society that was genuinely interested in supporting its early career members, so when a vacancy on its Early Career Steering Group (ECSG) was advertised, it was an easy decision for me to apply. To become a member of the ECSG, you need to put yourself forward or be nominated by a member of the Society (I was nominated by Professor Persaud). I also had to provide a short essay on why I was interested in becoming a member. Acceptance is not automatic, as nominations are vetted by existing members of the Group and new members are chosen by ballot. After a few weeks, I was excited to receive an email saying that my application had been successful.

WHAT IT INVOLVES

As the name suggests, the ECSG's role is to look after the interests of early career endocrinologists and represent their views to the Society. Members are elected for 3 years, and the Group reports to the Society for Endocrinology's Council through the Group's Chair, which alternates between a basic scientist and a clinician every 2 years.

The ECSG comes up with programmes for the Early Career Symposium and organises the popular Early Career Quiz at the annual Society for Endocrinology BES conferences. We nominate medallists for some of the Society's prizes, so we must keep abreast of the latest advances in our fields and become conversant with other people's research.

Moreover, we serve as a sounding board for most policies and provide feedback on ideas or platforms before they are rolled out. For instance, the Society's newly established Leadership and Development Awards Programme (see page 29) was run past us for feedback before it was launched. These are fantastic opportunities to get immediate experience of how the Society operates and to help shape the way it functions. The commitment isn't too great, as meetings of the Group are held just twice a year in Bristol, with email communication in between.

THE REWARDS

Joining the ECSG a year ago has brought me closer to the Society for Endocrinology 'family'. I attended my first Society for Endocrinology BES conference last year in Glasgow and I was wowed by the experience. I particularly enjoyed the expert talks, which made me realise how varied and interesting endocrinology is.

The highlight was the Early Career Quiz, which gave me the chance to meet other early career scientists – over an authentic and delicious chicken tikka masala! I also had the opportunity to judge nominated posters for the Junior Poster Awards, which I think is nice to have on a CV.

Now, there's no looking back, as I'm a convert to Society meetings. I've submitted an abstract for this year's conference in Brighton, which I'm very much looking forward to attending.

In addition, I am now familiar with other excellent opportunities that are available to early career researchers. Together with two of my colleagues, I was recently awarded a Society for Endocrinology Public Engagement Grant, to present our research to the public. This will provide closer scrutiny of our work, and we'll gain first-hand experience of public reactions. Understanding these new perspectives will allow us to improve our research.

> ***'These are fantastic opportunities to get immediate experience of how the Society operates and to help shape the way it functions.'***

I've also realised that the Society for Endocrinology awards two generous Travel Grants per year, for members to present their work at conferences, and a Practical Skills Grant enabling people to visit other labs to learn new techniques.

Personally, I think that the Society was specially created for early career researchers. In terms of tangible benefits, if membership fees (about £38 per year) are considered an investment, I've made a 5000% return on mine since I became a member 4 years ago!

If you are an early career clinician or a scientist working in any area of endocrinology, and you are not yet a member of the Society for Endocrinology, I wonder what you are waiting for…

OLADAPO EDWARD OLANIRU
Postdoctoral Research Associate, Department of Diabetes, King's College London

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LESS THAN FULL TIME WORKING: THE BENEFITS AND CHALLENGES

WRITTEN BY ALISON MONTGOMERY

I conducted a recent poll via social media amongst a large group of over 17,500 UK-based female doctors who also happen to be mothers. Of these, 27.84% work full time, whilst the overwhelming majority – 72.16% – work less than full time (LTFT) in varying amounts.

This trend for LTFT working has increased over the years, in line with more women being part of the workforce.

The annual survey of doctors in training has consistently shown that LTFT trainees feel more positive about their training when compared with their full time counterparts.[1] In 2017, 10.7% of doctors in training worked LTFT; 91.2% of these were female and the choice to train LTFT was largely due to childcare commitments.[2]

WHO IS ELIGIBLE TO WORK LTFT?

The British Medical Association (BMA) and the Gold Guide from NHS Employers outline eligibility criteria for those wishing to train LTFT, divided into two categories.[3] Category 1 applicants are treated as 'priority' applicants.

Category 1

- Disability or ill health (this may include IVF programmes)
- Responsibility for caring (men and women) for children
- Responsibility for caring for an ill or disabled partner, relative or dependant

Category 2

- Unique opportunities for personal professional development, e.g. training for important sporting events, or short term extraordinary responsibility (a national committee)
- Religious commitment (e.g. involving training for a particular religious role)
- Non-medical professional development, such as management courses, law courses, fine arts courses or diplomas

Employers may be obliged to positively assess applications for LTFT working, but the decision to accept such applications remains with the individual employer. Even once an application has been accepted, the employer and employee may have differing views/needs regarding the kind of work pattern that is expected. The whole notion behind LTFT positions is to help accommodate flexible working for employees. Therefore if, after negotiations, the working pattern still fails to adapt to your needs, there is scope for appeal. It is best to give your employer as much notice as you can of your expectations, to help ensure the flexibility you require.

'I have not heard LTFT trainees express regret, such as wishing they had finished their training quicker, only "I wish I'd taken longer".'

THE BENEFITS OF LTFT

Going back to work after my second maternity leave on an LTFT basis has allowed me to juggle parental responsibilities, a research degree and training as an obstetrician and gynaecologist.

While working LTFT in medicine moves the goalposts further away in terms of completing training, the length of training is taken into account pro rata. This means that the actual amount of time spent at work to finish training is the same. For example, if you work 60% LTFT, 12 months of full time training takes 20 months.

The annual National Trainee Survey commissioned by the General Medical Council (GMC) consistently shows that LTFT trainees rank their quality of training above that of full time trainees, from their teaching, to confidence building and usefulness of their posts to future careers.[4] Concerns of being disadvantaged as an LTFT trainee have not been echoed in this survey.

THE CHALLENGES OF LTFT

I was hesitant to start working LTFT. My two main concerns were the stigma that consultants might attach to LTFT working and the effect on my training. Would I lose opportunities to my full time colleagues, impacting my career progression and confidence?

The nature of medicine and how we work has changed. The firm-based structure has steadily been diminished, with a move to shift work. This has favoured LTFT working, and so it is far less apparent whether one works LTFT or not.

Despite this, I have encountered disappointment and judgement through working LTFT from my seniors. Many people have not worked LTFT themselves, and lack understanding of the role of more flexible work patterns. This is being improved with the appointment of local and national LTFT Support Champions, to act as guardians for those working LTFT. The BMA also has a comprehensive guide for working LTFT and offers support for this purpose.

Financially, working LTFT does constitute a reduction in pay, but it directly reflects the amount of time for which one is at work. The BMA, the Medical Protection Society and the Royal College of General Practitioners all grant concessions to those on lower pay (e.g. those in LTFT working). However, some Royal Colleges charge the same annual fee to full time and LTFT workers. In addition, the cost of compulsory postgraduate examinations is not reduced for those working LTFT, nor that of the many courses required to pass them. On the plus side, the new study budget arrangements cover the costs of mandatory and many optional courses, removing any financial penalty for LTFT working.

IN CONCLUSION

Overall, LTFT training has benefited me personally and professionally. My positive feelings towards it are echoed by other trainees across specialties, both regionally and nationally. I have not heard LTFT trainees express regret, such as wishing they had finished their training quicker, only 'I wish I'd taken longer'.

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ENDOCRINOLOGY AND DIABETES, WE HAVE A PROBLEM...

WRITTEN BY HELEN SIMPSON & LOUISE HUNTER

In case you didn't know, in 2018, endocrinology and diabetes saw only 39% of ST3 posts (the point at which clinical trainees choose their medical specialty) filled after Round 1.

This figure went up to 73% after Round 2. However, these are worrying statistics, showing that many posts in our discipline were left unfilled. Regional overall fill-rates range from 20 to 100%.[1] Clearly many do not see a career in endocrinology and diabetes as attractive, yet *we* know it is the most interesting medical specialty, with vast opportunities, both clinically and academically.

Specialties of comparable size (e.g. respiratory medicine, cardiology, gastroenterology, acute internal medicine) achieved 2018 fill-rates of 80–100%.

A LACK OF EXPOSURE

Some of us have been involved in the two taster days organised by the Society for Endocrinology, the Young Diabetologists and Endocrinologists' Forum (YDEF) and the Association of British Clinical Diabetologists (ABCD).[2] Questionnaires circulated prior to those events suggested that there is little exposure to our specialty for many at undergraduate level or foundation year (FY)/core medical trainee (CMT) grades:

- 64% had done a diabetes and endocrinology placement
- 50% had little or no experience of diabetes/endocrine clinics, and
- 78% did not feel that they had had enough diabetes and endocrinology experience.

Anna Mitchell, Amar Puttanna and others have also looked at the statistics. They surveyed 316 medical students and reported that exposure to all aspects of endocrinology appears to be poor:

- 217 of 316 (69%) reported 'no' or 'little' exposure to endocrine outpatient clinics
- 197 of 316 (62%) reported 'no' or 'little' exposure to inpatient endocrinology work
- 131 of 316 (42%) reported 'no' or 'little' exposure to formal endocrinology teaching.

Of the 98 who reported 'some' or 'plenty of' exposure to endocrinology outpatient clinics, 14 (14%) were considering a career in the specialty. In comparison, 15 (7%) of the 217 individuals who reported 'no' or 'little' exposure to endocrinology outpatient clinics were considering diabetes and endocrinology.

Recently, we also held a recruitment 'fringe' meeting in Glasgow at the Society for Endocrinology BES conference 2018. In addition to 30 attendees, others contributed by email. Again, a key theme that arose was a lack of exposure of potential recruits to endocrinology and diabetes.

'78% [of those at undergraduate level or foundation year/core medical trainee grades] did not feel that they had had enough diabetes and endocrinology experience.'

Of those of us working in endocrinology, anecdotal evidence suggests that exposure to endocrinology – and, in particular, attendance at endocrinology clinics and having a mentor or senior person who took an interest in us – contributed to our choice of endocrinology as a career.

SUGGESTIONS FOR CHANGE

None of this is new, so what can we do to improve the situation? It is clear we need to engage with medical students and junior doctors. Suggestions that have been discussed include the following.

- Encouraging student endocrinology societies, with students undertaking projects with us, as part of special study models, etc. There are no data to show that these increase uptake into endocrinology but, anecdotally, it does encourage some.
- Teaching FY trainees.
- Considering initiating FY3 diabetes and endocrinology modules or posts.
- Encouraging individuals at CMT/internal medicine trainee (IMT) grades to attend clinic. This is a challenge but is crucial. Clinic is where many of us had our first experiences of endocrinology and, without it, many will never see what our specialty has to offer.
- Running taster days – locally, regionally and nationally – the next one is in September 2019 in Newcastle upon Tyne.
- Trying different styles of recruitment: we can challenge the status quo in the way we do things. North Wales had no middle grades in their Emergency Departments. However, after a 'guerrilla' advertising campaign by Linda Dykes and others, and developing an unofficial website extolling the virtues of living and working in North Wales, they now have no rota gaps.
- Developing jobs with separate funding, such as clinical fellow posts. Funding for these is often linked to general internal medicine (GIM), and uptake can be variable, but they offer a different route by which to recruit into diabetes and endocrinology.

THE IMPACT OF GIM

Perhaps unsurprisingly, another emergent theme was the amount of GIM at specialty trainee level. Endocrinology and diabetes trainees, in the vast majority of their training rotations, participate in the GIM on-call rota. The prospect of being the medical registrar on-call does influence career choices.[3] All agreed that making the life of the medical registrar on-call less miserable was crucial. Increased activity, a smaller workforce and a lack of team-working make it a very stressful role in hospital.

Many medical specialties have opted out of GIM, potentially making those fields more attractive to trainees who are put off by the medical registrar role. The implementation of Shape of Training (**www.shapeoftraining.co.uk**) will change how many specialties contribute to providing GIM care, so the hope is that rota gaps reduce. However, it is noteworthy that some specialties which do currently participate in GIM still have better recruitment statistics than ours. This may be because some of these are procedure-based specialties which have time off the GIM rota, and so do not contribute as many years as part of their training. The Association of British Clinical Diabetologists and the Society for Endocrinology recently published a position statement on the 'Shape of Training', read more at **www.endocrinology.org/media/3167/sfe_abcd-position-statement.docx**

LOOKING CLOSER TO HOME

However, we have agreed that we can't attribute poor recruitment purely to GIM. We need to look at ourselves, and examine how we act and what we do. Discussions also considered the current diabetes and endocrinology workforce. Is there widespread recognition of a recruitment problem andwidespread willingness to do something about it? Are we (consultants and current trainees) good role models?

HOT CASES: MAKING GENERAL MEDICINE COOL AGAIN

WRITTEN BY SHAZIA HUSSAIN, REBECCA GORRIGAN, MONA WATERHOUSE & WILLIAM DRAKE

General internal medicine (GIM) training has been associated with much negativity in recent years. Published evidence indicates that many core medical trainees (CMTs) have been unable to attend educational activities due to service demands, which has knock-on effects on the career choices they make.[1]

More recently, a brief article was published on how hospitals must 'sex-up' general medicine,[2] not only to improve the care received by patients with complex needs, associated with multiple morbidities, but also to improve trainee recruitment and retention.

It is hoped that some of these issues will be addressed by the new internal medical training (IMT) curriculum. However, in addition, physicians still need to take active steps locally, to ensure we continue to inspire our younger generation of doctors to choose a career in diabetes and endocrinology. Given the close association with GIM, physicians in diabetes and endocrinology are well placed to have a positive influence on GIM 'culture' in secondary and tertiary hospitals.

'…Hospitals must 'sex-up' general medicine, not only to improve the care received by patients with complex needs, associated with multiple morbidities, but also to improve trainee recruitment and retention.'

RAISING THE TEMPERATURE

Recognising these factors, we attempted to improve the delivery of postgraduate general medical training at St Bartholomew's Hospital, London, by introducing a fortnightly 'hot cases' educational programme in October 2018. Our organising clinician team consisted of three experienced physicians in endocrinology/general medicine and an endocrinology, diabetes and GIM/chief registrar.

Based upon the typical 'morning report' model, the aim was to promote educational discussion through carefully dissecting the presentation and management of a general medical patient admitted to the hospital in the preceding few weeks, in the course of a 45-minute session. Owing to the increasing regulations surrounding junior doctors' working hours, and the logistical difficulties in delivering early morning teaching in a tertiary unit, we decided to run these sessions in the early afternoon, with a morale-boosting lunch provided from the hospital education budget.

'The opportunity for interaction with junior doctors at pivotal points in their training, in a supportive, facilitative teaching environment, has the potential to attract talented young doctors into the specialty.'

INITIAL COOL RECEPTION

At first, take-up was cautious. Informal canvassing of opinions revealed competing departmental commitments, a desire to finish the day on time and incomplete publicity as reasons for limited attendance. Over the course of 2 months, collaborative working with the medical education team to publicise the teaching improved attendance, but competing departmental events were still a limiting factor.

Written, anonymised feedback from those who attended was overwhelmingly positive. It was in favour of continuing the sessions, and provided the 'entrée' to discussions with other departments about rescheduling activities and releasing trainees to facilitate attendance. Numbers at the sessions continue to rise steadily.

OFFERING A WARM WELCOME

Protocols, guidelines, targets and shift pattern working all combine to threaten the traditional teaching ward round in which the pathophysiology of a clinical case is dissected. The clinical discipline of diabetes and endocrinology, inextricably linked to GIM, lends itself well to the 'hot cases' approach. In turn, the opportunity for interaction with junior doctors at pivotal points in their training, in a supportive, facilitative teaching environment, has the potential to attract talented young doctors into the specialty. We strongly encourage other units to consider setting up such programmes locally, and to use 'hot cases' to make GIM cool again.

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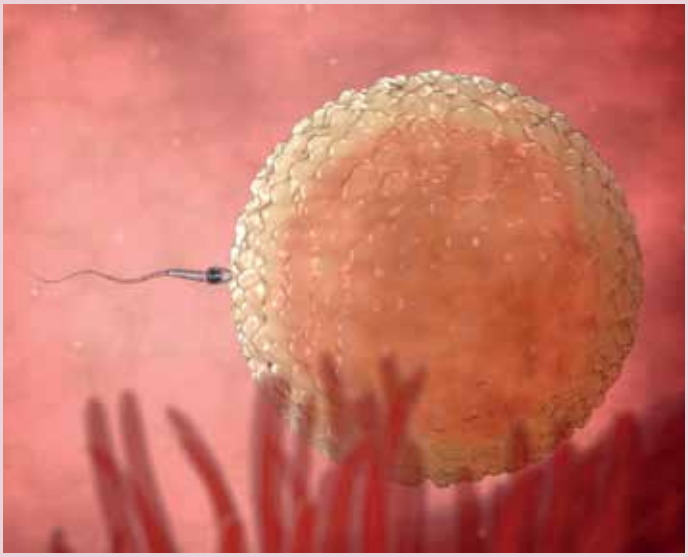
EARLY CAREER PRIZE LECTURERS 2018

SCIENCE: THE IMPORTANCE OF LOCAL STEROID ACTION IN THE REGULATION OF FERTILITY

WRITTEN BY DOUGLAS GIBSON



The endometrium, the lining of the womb, is a classic endocrine target which undergoes recurring changes in response to the ovarian secretion of oestradiol and progesterone during each menstrual cycle. This promotes co-ordinated remodelling of the tissue, and is required to create an optimal environment for implantation of a blastocyst. These changes are essential for the establishment of pregnancy; their dysregulation is associated with infertility and disorders of pregnancy.

Establishment of pregnancy is dependent upon 'fine-tuning' of the endometrial microenvironment, which is mediated by differentiation (decidualisation) of human endometrial stromal fibroblasts (hESF).[1] The post-ovulatory rise in progesterone acts as an endocrine signal to stimulate decidualisation of oestrogen-primed hESF. However, decidualisation occurs within spatially discrete regions of the tissue. This led us to speculate whether local steroid action may be required to regulate endometrial remodelling during the establishment of pregnancy.

The term 'intracrine' emerged as a new concept in endocrinology in the 1980s. It describes the ability of cells within non-gonadal tissues to both produce and respond to hormones, without significant release of active hormones into the peripheral circulation.[2] This concept presented an analytical challenge, as measurement of serum hormones would not give an indication of the bioavailability of steroids within tissues subject to intracrine regulation.

Some insight could be gained from classic studies of metabolism in human endometrial tissues, using radiolabelled steroids which demonstrated a capacity for conversion of steroid precursors to active testosterone, dihydrotestosterone and oestradiol.[3–7] More recently, liquid chromatography–tandem mass spectrometry methods allowed sensitive analysis of concentrations of steroids detected in serum and matched endometrial tissue samples. These studies revealed that tissue concentrations were distinct from those in serum, and that tissue homogenates had greater concentrations of dehydroepiandrosterone (DHEA) and less testosterone and oestradiol than corresponding serum samples.[8,9]

Although these studies suggested a capacity for local regulation of steroid availability within endometrial tissues, whether local action could regulate the processes required for the establishment of pregnancy was not known.

Using a robust *in vitro* model of decidualisation, we demonstrated an important role for local steroid metabolism in regulating hESF function, something previously considered a solely endocrine-mediated process.[10–14] The hESF were isolated from endometrial tissue biopsies, cultured *in vitro* and decidualised by incubation with progesterone and cyclic adenosine monophosphate. We conducted detailed time-course profiling of the steroidogenic capacity of hESF during decidualisation by assessing expression of steroid-metabolising enzymes by quantitative PCR, Western blotting and immunocytochemistry, as well as measuring steroid concentrations in cell culture supernatants.

We assessed expression of androgen biosynthetic enzymes and found that 3β-hydroxysteroid dehydrogenase, aldo-keto reductase family 1 member C3 and 5α-reductase were all expressed in decidualised hESF and that this was associated with a corresponding synthesis of androstenedione, testosterone and dihydrotestosterone.[12] Notably, activation of androgens in decidualised hESF was time-dependent and both enzyme expression and androgen production were greatest within the first 4 days of an 8-day decidualisation time course.

To determine whether this local production of androgens represented intracrine regulation of hESF, we co-incubated cells with the androgen receptor antagonist flutamide. Consistent with time-dependent synthesis of androgens, flutamide had a significant impact on expression of decidualisation markers and inhibited their secretion by decidualised hESF by up to 80% within the first 4 days of the decidualisation time course. Blocking local androgen action also affected the trajectory of hESF differentiation and secretion of the key implantation marker osteopontin, which was reduced by 40% at the 8-day time point.

We also assessed whether hESF had the capacity to locally activate oestrogens via bioavailable precursor androgens during decidualisation. We established that aromatase, the key enzyme required for synthesis of oestrogens, was increased in decidualised hESF; this resulted in time-dependent increases in synthesis of oestradiol that peaked after 8 days of decidualisation.[10] Aromatase inhibition with letrozole reduced synthesis of oestrogens, but did not alter secretion of decidualisation markers. Although oestradiol was dispensable for decidualisation, in further experiments we discovered that it was a key paracrine mediator that regulated endometrial immune cell function and vascular remodelling.[11]

These studies suggest that metabolism and activation of steroids within the endometrium enables 'fine-tuning' of steroid hormone-dependent processes. In light of this, we speculated that 'inactive' precursors, such as the adrenal steroid DHEA, could also play an important role in regulating endometrial function in women. Although concentrations of DHEA are unchanged across the menstrual cycle, they decline precipitously with age, and are half peak concentrations by the age of 40.[15] At this point, the age-related decline in fertility is pronounced in women, and implantation rates in both natural and assisted reproduction are decreased.[16]

To investigate whether DHEA availability could affect endometrial function, we isolated hESF from women of advanced reproductive age (mean age 44.7±2.3 years) and assessed decidualisation responses with and

without supplementation with DHEA.[14] We found that decidualisation was reduced in hESF from women of advanced reproductive age, but that supplementation with DHEA increased local androgen production. Furthermore, increased androgen bioavailability as a result of DHEA supplementation enhanced secretion of both decidualisation and implantation markers.

'These findings represent a paradigm shift in our understanding of the importance of local sex steroid action in the endometrium during the establishment of pregnancy, highlighting new therapeutic targets for reproductive health and disease.'

Our studies suggest that local activation of androgens and oestrogens is time-dependent and necessary for optimal spatial and temporal remodelling of the endometrial tissue microenvironment. We have also found that availability of circulating steroid precursors, which decline with age, affect intra-tissue steroid concentrations, and this may contribute to the age-related decline in fertility in women.

Collectively, these findings represent a paradigm shift in our understanding of the importance of local sex steroid action in the endometrium during the establishment of pregnancy, highlighting new therapeutic targets for reproductive health and disease.

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CLINICAL: NEUROKININ 3 RECEPTOR ANTAGONISTS – THE MAGIC BULLET FOR HOT FLUSHES?

WRITTEN BY JULIA PRAGUE

Over the last 15–20 years, textbooks outlining the hormonal control of the reproductive system have had to be rewritten, as novel research studies have identified the role of a population of hypothalamic 'KNDy' neurones, which co-express the neuropeptides kisspeptin, neurokinin B (NKB) and dynorphin, in regulating gonadotrophin-releasing hormone (GnRH), gonadotrophin and sex steroid secretion.[1]

Furthermore, over the same period, Naomi Rance, a pathologist in Arizona, USA, and her colleagues were researching the role of NKB, together with its receptor (the neurokinin 3 receptor; NK3R), in the generation of menopausal hot flushes.

They had initially noted hypertrophy and increased activity of NKB neurones, with increased NKB gene expression, in the brain tissue of post-menopausal women when compared with pre-menopausal subjects at post-mortem. Their subsequent work in monkey and rat models confirmed neuronal plasticity in response to oestrogen status, just as is seen in the menopause and with hormone replacement therapy (HRT). They identified that NKB/NK3R signalling is critical in the autonomic thermoregulatory pathway via the median pre-optic nucleus.[2]

Commensurate with this, a randomised, placebo-controlled, study demonstrated that peripheral intravenous infusion of NKB induced hot flushes in pre-menopausal women similar to those described by menopausal women.[3] In pre-menopausal women, this physiological signalling pathway achieves co-ordination of reproductive hormone status and thermoregulation throughout the menstrual cycle, to improve fertility and success of pregnancy, but becomes pathological when reproductive potential is subsequently lost.

In response to falling circulating oestrogen levels, 70% of women experience menopausal flushes over a long period of time (median 7.4 years);[4] these typically impact on all aspects of their daily life. Many women have a contraindication or aversion to HRT. Consequently, a novel therapeutic that could safely attenuate such flushes should benefit a huge number of women (estimated to be 10 million individuals in the UK alone[5]).

'This was the first report of an oral NK3R antagonist effectively attenuating menopausal hot flushes in humans, without the need for oestrogen exposure, by preventing NKB/NK3R-mediated activation of the thermoregulatory pathway.'

We were keen to try and investigate this unmet clinical need. In the context of the pre-existing literature, we hypothesised that an oral NK3R antagonist would attenuate menopausal flushes. Our investigator-initiated

and investigator-led randomised, double-blind, placebo-controlled, crossover trial tested this hypothesis in a proof of concept study.[6]

We recruited women aged 40–62 years, who had been amenorrhoeic for at least 12 months, and were having at least seven hot flushes per 24-hour period, of which some were bothersome or severe. Participants received 4 weeks of treatment with an oral NK3R antagonist twice daily (MLE4901; Millendo Therapeutics, Inc., Ann Arbor, MI, USA) and 4 weeks of treatment with an exact-match placebo twice daily, in random order, separated by a 2-week washout period.

Participants recorded their symptoms in real-time and completed daily questionnaires. For the first 48 hours of each week they wore a sternal skin conductance monitor, to objectively measure their flushes. They also attended a weekly clinical review, where blood samples were taken to measure hormone concentrations and renal/liver function for safety monitoring.

'Our findings suggest great promise for this therapeutic class in the treatment of menopausal flushes … such agents may also be a potential therapeutic for cancer patients.'

MLE4901 significantly reduced the total weekly number of hot flushes by 45 percentage points when compared with placebo. The treatment effect size was similar, irrespective of drug order. Furthermore, compared with baseline, hot flush frequency reduced by 73%, severity by 45%, bother by 51% and interference by 72% after 4 weeks of treatment with the oral NK3R antagonist. Good concordance was shown between subjective reporting and objective measurement of hot flushes.

This was, therefore, the first report of an oral NK3R antagonist effectively attenuating menopausal hot flushes in humans, without the need for oestrogen exposure, by preventing NKB/NK3R-mediated activation of the thermoregulatory pathway.[6] Further post-hoc analysis showed that the therapeutic time-to-onset of MLE4901 was rapid (by day 3 of treatment) and sustained throughout the 4-week treatment period, with an additional therapeutic benefit on sleep.[7]

Our next focus of investigation was to examine the impact of our oral NK3R antagonist on luteinizing hormone (LH) pulsatility. We were intrigued that the pre-existing literature (two seminal papers from 1979) concluded that the menopausal flush synchronised with the LH pulse, and that this had since been widely accepted.

Using a modern, commercially available, LH immunoassay and mathematical modelling we investigated whether we would find the same relationship. Using two validated mathematical models to analyse LH pulsatility, together with self-reporting of flushes during an 8-hour clinical study, we found that the probability that the two event intervals (hot flush and LH pulse) matched was low in the majority of participants (mean $P=0.24$; where $P=1$ reflects perfect association).[8]

This, therefore, challenges the previously accepted dogma, and suggests that the KNDy neurones regulate LH pulsatility and hot flushes by different signalling pathways, which has therapeutic and mechanistic implications.

Our findings suggest great promise for this therapeutic class in the treatment of menopausal flushes in the future.[9] Furthermore, as the aetiology of hot flushes in women taking oestrogen deprivation therapy for breast cancer, and for men taking androgen deprivation therapy for prostate cancer, is likely to be the same as in the menopause, such agents may also be a potential therapeutic for cancer patients, as they do not require sex steroid exposure to yield their effect.

Further larger and longer studies in menopausal women, and subsequently in cancer patients, are required to ensure that efficacy and safety are confirmed, and the pharmaceutical industry is already heavily involved in taking this forward.[10] If these studies are successful, then NK3R antagonists could be practice-changing, and will serve as an important reminder to us all of the absolute importance of good basic science in successful translational research, and the debt we owe to those individuals who agree to participate in clinical trials.

I would like to acknowledge Professor Waljit Dhillo as my PhD supervisor.

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ON THE QUEST FOR RESEARCH GRANT FUNDING

WRITTEN BY KIM JONAS

Having achieved the academic equivalent of finding the holy grail by securing a lectureship, the next not-so-trivial task is to attract research funding.

This can seem rather daunting, especially when getting to grips with a new teaching load, and with the expectation of securing substantial grant funding during your probationary period. Good time and resource management is essential if you are to put yourself in the best possible position to secure that funding.

As a relatively new lecturer, who is 4 years into academic life and a recent recipient of a BBSRC New Investigator Award, I have been tasked with writing a guide to maximising your chances of obtaining funding. As you read this article, you'll realise that grant success unfortunately isn't formulaic, but there are certainly things that you can do to optimise your chances.

The following is, therefore, more a selection of 'hints and tips' from myself and others, which we have learnt along the way. It is by no means an exhaustive list, nor a guide to grant application writing itself, as most universities provide in-house guidance on this. Hopefully it will, however, provide a gem or two, to give you the best possible chance of securing funding, particularly during those early academic years.

APPLY FOR SMALL GRANTS FIRST

Taking advantage of early career grant schemes and building a portfolio of small grants is a good way of beginning to attract research funding. These smaller grants are great for generating pilot data for larger applications and for building a funding footprint, so that when you apply for larger grants you have a funding track record. Smaller grants also allow you to hone your craft and develop your grant application writing skills by means of completing less onerous and time-consuming applications.

As an entry level lecturer, take advantage of early career grant schemes such as the Society for Endocrinology's Early Career Grant, Equipment Grant, Summer Studentships and other such schemes run by learned societies, charities and often your own institution.

> *'Including a unique selling point in any application is a must when answering the inevitable "Why you? Why now?" questions.'*

The added bonus of these schemes is that the numbers of applications are generally lower than in the case for larger grant schemes, and success rates tend to be higher than research council-based grants. For example, the November 2018 round of the Society's Early Career Grant had a funding rate of ~30%, and the Summer Studentships ~40%, which are far higher than the rates for most UKRI (UK Research and Innovation) schemes, which stand at ~25%.[1,2] This therefore gives you better odds of success.

Securing these smaller grants also shows funders that you are fundable and enhances your CV when it comes to applying for larger grants.

WHAT'S YOUR UNIQUE SELLING POINT?

A major part of writing any grant application is selling yourself, your ideas and your research environment. Including a unique selling point (USP) in any application is a must when answering the inevitable 'Why you? Why now?' questions.

Good examples of USPs include a novel or pioneering technique that you developed, expertise and a publication pedigree in an area that is uncommon and desirable to funders, big data sets, a novel model (insert your choice of organism/cell type/data set) or innovative multidisciplinary approach to addressing your question.

The research environment that your department/organisation brings is also important, particularly in the early stages of your career. This is something to think about in terms of forging new collaborations and justifying how your environment provides opportunities, expertise and facilities that are new or the best, in order to address your research questions.

DO YOUR HOMEWORK!

Probably the simplest, yet most overlooked, thing you should do when applying for grants is to utilise information on the funding bodies' websites. See what their current funding priorities are and how/if your research fits with these areas. Use this information to tailor your applications and be strategic about how you package your research ideas.

Most funding bodies list successful grant applications. Look through these and use this information to see what grant panels are currently funding. Panel members are also usually listed on funders' web pages, and the likelihood is that one of these people will be at your organisation. Be bold and contact them to ask for writing tips; if you're lucky they may offer to read your application.

If applying to research councils, make sure that you know the remit of the committee that you are submitting to and tailor your application accordingly.

COLLABORATE

My first big grant success as a principal investigator (PI) came from being a collaborator on a multicentre National Institutes of Health programme grant. Not only was this a key step in moving from attracting small to larger grant funding as a PI, it also marked the beginning of a supportive collaborative network through which I can share ideas and resources with more experienced and highly respected colleagues in my research field. This collaboration was initiated through me talking at a conference and having a unique methodology (see USP) to explore my collaborator's research question.

Do utilise links with colleagues and mentors and look for new collaborations across your organisation, as you never know what opportunities they may bring. They have the potential to lead your work in new and interesting directions, and to create that USP by bringing multidisciplinary and/or translational aspects to your research.

I know of early career colleagues who have been actively discouraged from collaborating with others, especially field leaders, on the basis that they should be striving for independence and building their own track record. My personal opinion is that this is a short-sighted view. The best science is achieved in collaborative, cross-disciplinary teams, which utilise the strengths and expertise of each contributing PI. So, get out there and network!

SEEK INPUT AND FEEDBACK

Don't be proud! Testing your ideas on trusted colleagues and mentors who will give *honest* feedback is probably the most important tip of all. Speak with them during the embryonic stages of your idea, before you have put pen to paper. This will help to streamline your ideas and know that you're on the right track.


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'Don't be proud! Testing your ideas on trusted colleagues and mentors who will give honest feedback is probably the most important tip of all.'

When you have written a draft of your case for support, ask non-subject experts as well as subject experts to read it. The most useful (and brutal!) feedback I received was from colleagues outside my research field, without whom I am almost certain I wouldn't have obtained my New Investigator Award.

From a UKRI or Wellcome Trust perspective, non-expert colleagues are more likely to reflect the scientific background of panel members who will be communicating your grant applications and arguing for you at the panel meetings. So, making sure that your ideas are clearly defined and communicated to this audience as well as to subject experts is essential.

Some universities have internal policies about grant application review prior to submission, which can seem a little onerous. Don't see this as a tick-box exercise or unnecessary bureaucracy, rather view it as an opportunity to obtain feedback to submit the best version of your application.

BE RESILIENT AND PERSEVERE!

With the success rates of applications to the MRC and BBSRC hovering around ~25%,[1,2] the likelihood of yours being rejected is high, so resilience and perseverance are important.

After licking your wounds and, no doubt, having a few choice words to say at the injustice of not being funded, read through the feedback from the reviewers, request panel feedback and act on it. Use the feedback firstly to know if you're on the right track with your ideas. And ultimately use it to guide you about how to reshape, repackage and improve the application to maximise the chances of it being funded.
Different funding bodies have different policies on resubmission. For example, Research Councils don't allow resubmissions unless invited, but they do have guidelines on what constitutes a new application,[3] so look through these and seek advice.

As the phrase goes, 'You've got to be in it, to win it!' So, keep plugging away and submit those applications, listen to feedback and success should follow.

KIM JONAS
Lecturer in Reproductive Physiology, Department of Women and Children's Health, School of Life Course Sciences, King's College London

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1. MRC 2018 *Success Rates: 2017/18 Summary* https://mrc.ukri.org/research/funded-research/success-rates/#grant.
2. BBSRC 2018 *Application Success Rates* https://bbsrc.ukri.org/funding/post-application/success-rates.
3. MRC 2019 *Guidance for Applicants* https://mrc.ukri.org/funding/guidance-for-applicants.

CORPORATE SUPPORTERS

The Society recognises that industry is a crucial part of the endocrinology community and through our Corporate Support scheme we commit to facilitating dialogue between professionals in industry, academia and clinical practice. In doing so, we can better represent endocrinology as a discipline, identify its challenges and find better healthcare solutions.

For further information, visit **www.endocrinology.org/corporate** or contact **sophie.tovey@bioscientifica.com**.

SOCIETY FOR ENDOCRINOLOGY PARTNER

Pfizer is one of the world's premier innovative biopharmaceutical companies, discovering, developing and providing over 100 different medicines, vaccines and consumer healthcare products that help save and transform the lives of millions of people in the UK and around the world every year.

For more than 25 years, Pfizer Endocrine Care has been committed to the advancement of endocrinology. This is demonstrated by our innovations in endocrine care: Pfizer UK was the first company to launch single-dose and multi-dose growth hormone (GH) delivery devices; it has built up the largest international databases of patients receiving GH therapy; and it produces the first and only GH receptor antagonist for the treatment of acromegaly.

The Society for Endocrinology has agreed a 2-year partnership with Pfizer. The agreement is the first of its kind for the Society, and aims to deliver maximum benefit to both organisations and the broader aim of advancing endocrinology.

Paul Carroll, Chair of the Society for Endocrinology Corporate Liaison Committee, says
"*The partnership recognises the Society for Endocrinology's commitment to working with industry to achieve its objectives. It represents a true collaboration with an industry partner, working on joint projects for the benefit of endocrinology.***"**

James Steed, UK Lead for Endocrine Care at Pfizer, comments
"*The NHS is changing in response to various pressures, and the needs of our partners and the people they care for reflect this. We believe that, through working in partnership, combining our skills, experience and resources, together we can tackle some of the greatest challenges facing the NHS today. The new partnership will strengthen Pfizer's relationship with the Society, and ultimately improve patient care.***"**

To find out more about what Pfizer are doing to support the NHS and patients in the UK, please contact Endocrine Country Brand Lead on +44 (0)1304 616161.

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HRA Pharma has partnered with the endocrinology community for more than 15 years to bring effective treatment and support for patients with rare and ultra-rare diseases. We are passionate about improving the lives of patients with these conditions and offer effective long-term management options to improve the quality of life and experience of care for patients.

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What's new at **SfE BES 2019?**

WRITTEN BY DUNCAN BASSETT

This year, the Society for Endocrinology BES conference is set to bring you a novel programme format, focusing on each of the endocrine subspecialties and their Endocrine Network communities. The new presentation areas and innovative sessions at SfE BES 2019, on 11–13 November in Brighton, will ensure that there is something for everyone. Here, Duncan Bassett, our new Programme Secretary, explains what's different and why you should take the time to explore this essential event on the endocrinology calendar.

EMBRACING CHANGE

When I took over as Programme Secretary last November, one of my top priorities was to encourage a greater number of higher quality and more diverse suggestions for our conference programme. The aims were to ensure that the programme was even more inclusive, and delivered for all key interest groups.

I think it is important for us as endocrinologists to challenge ourselves, to get out of our comfort zone and to embrace new technologies and approaches. Our annual conference is the ideal opportunity to increase exposure to world-leading innovation and to highlight new opportunities to advance endocrinology, as well as to bring the best cutting-edge clinical, basic and translational research to the community.

So we have introduced a fresh, novel programme for SfE BES 2019, which highlights the full breadth of endocrinology, and provides plenty of opportunities to advance our knowledge and strengthen collaboration within our community. As well as being more streamlined, the programme has fewer clashes and more time for lunch and networking with your colleagues and the wider community.

NOVEL AND VIBRANT

The tone of novelty, excitement and impact will be evident from the start, with two 'What is New?' sessions highlighting the most impressive advances in clinical endocrinology and basic science in the preceding year.

The Society's Endocrine Networks, which bring together communities of Society members working in particular fields and subspecialties, will be more strongly engaged in the new format. This is evident in the programme, through co-ordinated symposia, Meet the Expert sessions, oral communications, poster sessions and prizes dedicated to each Network's subspecialty. Our hope is that by ensuring leaders in the field are present, we will see an enhanced quality of questioning and greater interactions between members of the Networks at both more junior and senior levels. Dedicated Network meetings, on Wednesday lunchtime, will encourage members to connect with their Network colleagues to spark new collaborations and engage in developing suggestions and topics for their Network's sessions at next year's conference.

INTRODUCING INNOVATION

I think it is important to highlight major new national and global research initiatives, and to present opportunities for these resources, technologies and approaches to be incorporated into endocrine research. At SfE BES 2019, new, parallel, Innovation Sessions will cover clinical, scientific and industry developments, highlighting cross-cutting novel technology, ideas, resources or funding to both clinicians and research scientists.

Tuesday now features a dedicated programme for nurses that avoids clashes with the popular and valuable 'How do I?' sessions. In addition, nurses are invited to join the early career quiz on the Monday night, where they can network with fellow nurses from across the UK in an informal setting.

The SfE Theatre will bring a new dynamic and particular focus to the conference's Exhibition Hall. It will be used for product demonstrations, lightning talks, Q&A sessions, oral poster sessions, and even a book launch by one of our senior endocrinologists. These events will take place in the Exhibition Hall during coffee breaks and lunchtimes, so keep an eye out for what's coming up.

As always, the Society for Endocrinology BES conference offers a fantastic opportunity to exchange knowledge, share experiences and strengthen collaborations across our global community, I look forward to meeting you in Brighton.

DUNCAN BASSETT
Programme Secretary, Society for Endocrinology

View the new programme at
www.endocrinology.org/events/sfe-bes-conference/sfe-bes-2019/scientific-programme

Learn about the Endocrine Networks at
www.endocrinology.org/membership/endocrine-networks

Become an ENDOCRINE AMBASSADOR

The Endocrine Ambassador Grant (up to **£200**) is available to support events that encourage students and colleagues into the world of endocrinology, including interdisciplinary seminars and career events.

By acting as a visible representative for the Society at your institution you can help younger endocrinologists and colleagues in related fields to get involved with the Society, Society events and the field in general.

SOCIETY FOR ENDOCRINOLOGY AMBASSADORS

• **Nigel Page**	Kingston University London
• **Oonagh Markey**	Loughborough University
• **Mohammed Gulrez Zariwala**	University of Westminster
• **Lawrence Hayes**	University of Cumbria
• **Craig Beall**	University of Exeter
• **Daniel Adekunbi**	Babcock University (Nigeria)

We aim to have one or more ambassador at **each UK institution** that has a course or department that is involved in endocrine science.

DO YOU ALREADY PROMOTE THE SOCIETY AND HELP BUDDING ENDOCRINOLOGISTS?

You already are an ambassador; apply to receive recognition for your work and access to the Endocrine Ambassador Grant to pay for a seminar at your institution.

Apply to become an ambassador today

www.endocrinology.org/membership/endocrine-ambassadors

Society membership: CATEGORIES ARE CHANGING

The membership of the Society for Endocrinology is amazingly diverse, with members gaining an interest in endocrine science through many different routes and professional backgrounds. Our previous member categories no longer reflect the diversity of our community, so we're changing these to better serve our members.

All members will fit into one of the five below categories, with a sub-category that reflects their career stage. These new categories will allow us to better tailor our activities and provide members with relevant communications and benefits throughout their careers.

CATEGORY

Research active

- Scientist
- Clinical Academic
- Clinician-in-Practice
- Nurse
- Associated Professionals*

Clinically qualified

*e.g. clinical biochemists, pharmaceutical professionals, lab technicians, veterinarians, dietitians, physician associates, nursing associates

CAREER STAGE

Student ▶ Early Career ▶ Full ▶ Senior (Retired)

More detailed definitions of each category are on the website at **www.endocrinology.org**.

WE'VE ALLOCATED YOU TO A CATEGORY; PLEASE CHECK IF IT'S CORRECT.

1. CHECK YOUR MEMBERSHIP CATEGORY

Check your inbox for emails about this or login to the members' area at **www.endocrinology.org**.

2. UPDATE YOUR DETAILS ONLINE

You can update your membership category using the online form at: **www.endocrinology.org/membership/update-your-membership-category**.

Email **members@endocrinology.org** if you have any issues.

Society for Endocrinology

Keep growing **WITH US**

Renew your Society membership from 1 October

www.endocrinology.org

Summer Studentships: NURTURING THE NEXT GENERATION

Society for Endocrinology Summer Studentships enable students to gain valuable, hands-on experience in an active research environment. Supervisors can apply for £185 per week (for up to 10 weeks), plus up to £1,000 for consumables, in order to host an undergraduate student in their lab over the summer. We asked some of our previous hosts and students to tell us how it benefited their work and careers.

SUPERVISORS' EXPERIENCES

Lina Schiffer

Lina hosted a Summer Student at the University of Birmingham in 2018.

A summer project gives me the opportunity to follow a new, 'crazy' idea outside my core research projects, to generate some preliminary data and to decide at the end of the summer if it is worth going further down that route. Working on such early experiments is also a great chance for the student to bring in their ideas and be creative. I try to include as many techniques as possible, to give the student maximum exposure. By asking them to prepare everything from scratch for their own experiments, I encourage their independence and ownership of the project.

I enjoy seeing the student develop their lab skills, gain confidence and start working independently. Given the limited amount of practical lab work within the curriculum of most degrees, a summer project makes a significant contribution to a student's training and qualification. Working with a summer student helps me to improve my supervision and leadership skills, as well as with communicating my research ideas to a non-expert. To me personally, the supervision of a summer student is also an opportunity to give back to the community and support its next generation, which I find identity-establishing.

So a studentship is a great opportunity to explore a new project idea, to go out of the box, and to get an extra pair of funded hands in the lab (even bringing their own money for consumables). You also make an invaluable contribution to a student's training.

Jessica Ivy

Jessica is based at the University of Edinburgh, and hosted Eleanor Brain in 2018.

Eleanor and I talked through the options, based on her interests, and the ongoing themes and projects within the lab, before we came up with her project. It meant that she could add her mark to an ongoing theme within the lab, with the aim of presenting the research at the Society for Endocrinology BES Conference in Glasgow.

In a purely practical sense, it was tremendously useful to have a summer student. Eleanor was fantastic and picked up new skills and techniques very quickly, which meant she was able to really progress the project. Eleanor also engaged with the research and questioned the techniques and approaches, which is always really valuable, particularly when troubleshooting.

Having a summer student provides a great opportunity to build your skills as a supervisor and as a team player. It's also a great chance to share how stimulating, challenging and thrilling a career in research can be with the next generation.

You really cannot tell what research is like until you've tried it. Summer studentships are a fantastic, risk-free and (often) fun way of 'trying out' research in a lab. They're also a good opportunity to meet and interact with a range of scientists who are performing cutting-edge research, and to gain insights into the current biomedical challenges, the kinds of questions being asked and how they are being answered. The only risk is that you may catch the 'research bug' and never want to leave!

Daniel Kelly

Daniel hosted a Summer Student at Sheffield Hallam University in 2018.

This particular project started out as a conversation with a colleague in my department. We were talking about new projects that we could collaborate on together, and decided that we needed to test some of our ideas out in small experiments. It seemed as though this would fit a small project like a summer studentship well. By running alongside our other experimental work, it would also allow a large element of training for the student.

The most enjoyable aspect for me, and the real success, was watching Jess flourish and completely develop into a researcher. From her initial lack of confidence and limited lab skills, it was incredible to be part of her progression to a developed student, posing ideas and questions about techniques and research within and beyond the project. Generating some preliminary data was an added bonus.

Training summer students is always a rewarding endeavour. No two students are the same, so it always helps me with my supervisory skills and allows me to develop meaningful ways of teaching. Some of the data generated have been used in research proposals to extend the project into a larger body of experimental work. And, through this, the studentship has helped consolidate a small collaborative network within my department to allow me to expand my research area.

At the very least, it forces a researcher to take time to reflect on ideas or current research, in order to be able to devise a meaningful project, and necessitates time in the lab (which is always fun, refreshing and enlightening), which may otherwise be lost to administrative duties. If you have the time to train, work alongside and develop a student over about 8 weeks, then the outcomes and rewards can be great.

STUDENTS' EXPERIENCES

Eleanor Brain

Eleanor undertook a Summer Studentship at the University of Edinburgh in 2018.

I enjoyed the opportunity to do my own research project on a topic that I'm interested in, and gained a deeper understanding of a subject area beyond the scope of my undergraduate degree course.

The studentship helped me understand what a career in research entails and what it is like to work on a research project in a laboratory. I also improved my laboratory skills and gained experience in techniques that I would not otherwise have the opportunity to use during my undergraduate degree.

Having completed my physiology degree, I am now going on to study medicine. I would definitely like to undertake a PhD in the future, as I have really enjoyed being involved in research and I am keen to continue in the field of endocrinology, as it is such an interesting and varied field.

Studentships are a fantastic opportunity to experience what it is like to work in a research laboratory. It is definitely helpful in making decisions about future career choices and provides valuable laboratory experience and skills.

Hassan Khan

Hassan is based at Imperial College London, and held a Summer Studentship in 2017.

My project investigated the effects of a high or low protein diet on endocrine control of obesity. I undertook it at the end of my second year as a medical student.

It was interesting to see the theory behind the science being applied from start to finish, i.e. from primary cell culture all the way through to radioimmunoassays measuring hormone levels. The studentship helped me to develop skills working independently and to gain an understanding of the challenges of working in research. I was lucky to be able to sit in on PhD presentations and to see the results of their commitment.

Endocrinology remains one of my areas of interest, as it has a very broad application in terms of body systems. I think, even if I don't continue in endocrinology, this experience has certainly ignited my interest in the research process.

The studentship provides an opportunity to develop in an area of endocrinology with a hands-on, student-centred approach. The fact that a stipend is provided also means you don't have to worry about expenses over the summer. I would say to prospective students, 'If you have an interest in endocrinology and research, don't miss out! It's a fantastic way to get your first exposure to a research environment and have your own project.'

Mariana Norton

Mariana from Imperial College London held a Summer Studentship in 2014.

Thanks to the Summer Studentship, I found my passion for research and went on to undertake a PhD.

Having recently completed my PhD, I am now a post-doc in Professor Kevin Murphy's team at Imperial, where I completed my Studentship. If you are considering a PhD, the Summer Studentship is a great opportunity to experience what it is like to work in a laboratory and begin to build a network. Who knows, you may end up enjoying it so much that you stay on in the lab, like I did!

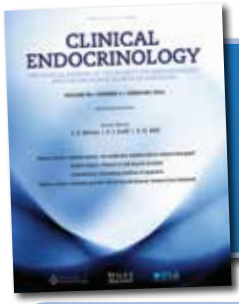
Visit **www.endocrinology.org/grants-and-awards/grants/summer-studentships** to find out more and to plan your application for next summer.

More success for Society journals: NEW IMPACT FACTORS ANNOUNCED

We are pleased report another extremely successful year for the Society's journals, following the recent announcement of the latest impact factors.

Journal of Endocrinology's impact factor has increased to 4.381. The journal now stands 31st out of 145 journals in the endocrinology and metabolism category. Now in its 80th year, it is well established as a leading title in its field.

"We only accept the top manuscripts, making JOE and JME the recognised home for quality basic and translational endocrine research. If your paper is published in JOE or JME, you know that it will come to the attention of your peers worldwide.
COLIN FARQUHARSON Co-Editor-in-Chief, *Journal of Endocrinology/Journal of Molecular Endocrinology*



Clinical Endocrinology received an impact factor of 2.897, standing at 79th out of 145 journals in its category.

Endocrine Connections' 2018 impact factor is 2.474, with the 5-year impact factor, a longer term measure of the authors' research impact, increasing to 2.915.

"The number one reason to publish in EC is that it supports academic, society-led dissemination of research findings. So your research is being read and reviewed by people who are involved and interested in the science.
KEELY MCNAMARA Senior Editor, *Endocrine Connections*

"EC provides a platform linking different disciplines within endocrinology, which is key, as all endocrine systems communicate with each other.
MARTINA RAUNER Senior Editor, *Endocrine Connections*

Journal of Molecular Endocrinology's 2018 impact factor is 3.744, with the 5-year measure also increasing, to 3.651. The journal now ranks 47th out of 145 journals in the endocrinology and metabolism category, climbing 11 places.

"It is wonderful to see that both JOE and JME received increasing impact factors this year, reaffirming the importance of both these journals in the preclinical international endocrinology research community. The Editorial Board has worked really hard to ensure that each submission is treated efficiently but, more importantly, fairly, providing feedback that is appreciated by the submitting authors, regardless of the outcome.
SOF ANDRIKOPOULOS Co-Editor-in-Chief, *Journal of Endocrinology/Journal of Molecular Endocrinology*

Endocrine-Related Cancer has achieved an impact factor of 4.774, with a 5-year value of 5.299. The journal remains in the top quartile in both its categories, ranking 27th in the endocrinology and metabolism category and 56th in the oncology category.

"ERC presents cutting-edge work, with rapid turnaround and fair and equitable peer review.
CHARIS ENG Editor-in-Chief, *Endocrine-Related Cancer*

"I think ERC is an important platform; unique in its focus on hormone-related cancers as well as on the metabolic associations with cancer and cancer treatments.
JOANNE NGEOW Associate Editor, *Endocrine-Related Cancer*

We thank the Editorial Boards, authors and all reviewers for their tremendous hard work and dedication. This has ensured that the Society's journals continue to be influential publications, which enable our community to advance scientific and clinical research in endocrinology for the public benefit.

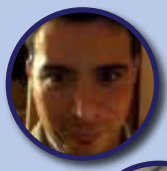
Our membership benefits include free online access to the Society's subscription journals. Visit the members' area at **www.endocrinology.org** to find out more about reduced rates on print subscriptions, as well as discounts on publishing in Society journals.

Leadership and Development Awards Programme: **INSPIRING FUTURE LEADERS IN ENDOCRINOLOGY**

We are excited to announce the first Awardees in our new Society Leadership and Development Awards Programme.

This ambitious programme aims to recognise and nurture emerging talent in endocrinology, to help the Awardees become the future leaders of our discipline. A wide range of benefits is available to Awardees, providing opportunities for them to develop their careers and professional profiles.

Join us in celebrating our inaugural Awardees, and watch out for updates on their progress over the next 3 years.



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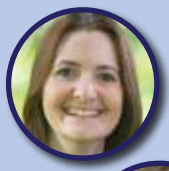

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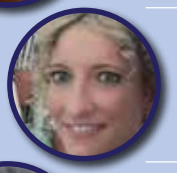

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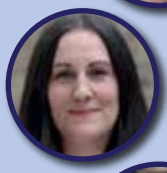

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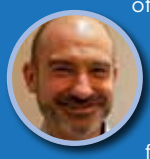
VICTORIA SALEM
London

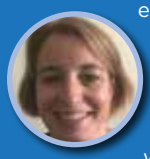
"The Society Officers and Council have introduced the Leadership and Development Awards Programme to help identify and support people who are enthusiastic and dedicated to endocrinology, so they are equipped to be our future leaders. It will provide unique opportunities for the Awardees and I hope it will help to support the careers of our talented trainees."

GRAHAM WILLIAMS President, Society for Endocrinology



"Working on this, from its inception, through its evolution and finally culminating in the selection of the first round of Awardees has been a hugely positive experience in so many ways. It has been terrific to see such an important initiative put into place in a relatively short period of time. One of the most encouraging things was to see the quality of the applications from the next generation of scientists and clinicians. With the support that the programme has to offer, I really do hope that we are able to further the development of the Awardees, and I have no doubt that they will become leaders of the future and contribute to the ever-growing success of the Society, becoming ambassadors for UK endocrinology on the international stage."

JEREMY TOMLINSON Member, Selection Panel



"I joined the working group and the selection panel for the programme as I believe clinicians with an interest in endocrinology should be given every opportunity to develop their profile. The number of applicants for the clinicians-in-practice group was smaller than for the other categories, but applications were of equally high quality. In the future, I hope we see higher numbers of clinicians applying for this programme. Congratulations to our current Awardees and good luck to all future applicants."

GEORGINA PAGE Member, Selection Panel

"The development of this Society programme, to nurture up-and-coming leaders in endocrinology, is inspirational and forward-looking. It is a pleasure and a privilege to be part of the working group that helped develop the programme and then to be part of the selection panel that had the hard task of deciding on the Awardees. It was a difficult decision as the calibre of applicants was very high. The future of endocrinology and of the Society is looking very bright!"

LEANNE HODSON Member, Selection Panel

Learn more about the Society's Leadership and Development Awards Programme at **www.endocrinology.org/grants-and-awards/prizes-and-awards/leadership-and-development-awards-programme**.

ANNE MARLAND

NURSE COMMITTEE CHAIR

I hope you have all had a relaxing summer and as the dark nights draw in it allows us all to reflect on our achievements over the last few months.

I am delighted that Alison Milne has shared with us her amazing achievement in winning the Endocrine Nurse award for 2019. Alison very eloquently shares with us her journey within endocrinology and how her commitment to patient care led her to work with the fantastic Pituitary Foundation. Alison's drive and commitment is a great inspiration to us all and we thank her for being a role model in setting up and developing the Pituitary Foundation's nurse support help line. This initiative supports not only patients but also their loved ones and carers. I hope Alison's words will inspire you all to strive to be the best you possibly can within your careers.

The SfE BES 2019 in Brighton is not long off and an exciting nurses' programme has been planned. The committee is excited to announce a nurses' social on the Monday evening; this is a great opportunity to network and share ideas. Tuesday's full-day academic programme is our opportunity to learn and engage in our specialist fields. Look forward to seeing you there.

BEST WISHES

ANNE MARLAND

ENDOCRINE NURSE AWARD WINNER 2019: ALISON MILNE

'Winning this prestigious award has indeed been an honour and a privilege.'

I have been affiliated with the Society for Endocrinology for many, many years now, and it is fantastic to see how much specialist nurses have grown and flourished over that time. Having our own award, in recognition of our hard work, is testimony to this. We are respected and valued within our specialist field and beyond.

Endocrinology, especially pituitary conditions, has been my passion, and my experience is vast. I was mentored predominantly by Professor John Bevan, who comments that I was probably one of the first Endocrine Specialist Nurses in the UK! Steroid education and patient safety have been paramount in my ever-changing role. I have always thought of myself as the patients' advocate.

My role as an Endocrine Specialist Nurse for The Pituitary Foundation over the course of 10 years really brought home how important we are in supporting our patients throughout their journey. You may or may not know that many hospitals in the UK don't have a specialist endocrine team and have no Endocrine Specialist Nurse to offer advice and support. The Foundation's nurse helpline is a valuable service for patients and the families and carers of people who have been diagnosed with a pituitary condition.

'Endocrinology, especially pituitary conditions, has been my passion, and my experience is vast.'

I have endeavoured to promote steroid education to patients and their families and carers, and also, importantly, to fellow healthcare professionals, which is an ongoing area of my work.

Working with The Pituitary Foundation, along with my role at Aberdeen Royal Infirmary, has given me a platform to share my knowledge.

I have been involved in writing patient information leaflets and factsheets, presenting at numerous meetings and conferences, lecturing at universities to student

'I am proof that, if you strive to do your best in your career, there really are no boundaries.'

nurses and medical and dental students, and contributing to advisory boards. I have delivered webinars and have enjoyed frequent involvement with various patient support groups.

I am proof that, if you strive to do your best in your career, there really are no boundaries.

Guidance and support from fellow nurses and colleagues, both within your team and in the wider endocrinology community, are of great benefit. That is why networking is extremely beneficial. So, don't be shy, attend as many conferences and educational meetings as you can.

I have worked with very supportive colleagues who believed in me and enabled me to grow within my role, and I have appreciated all the learning experiences that have brought me to where I am today.

Many nurses (myself included) think 'I couldn't do that' or 'I'm not qualified to take that on' or 'I don't have a degree or masters or lots of letters after my name.' I could go on, because I have thought and said them all, but, at the end of the day, we are capable of anything, especially if we are passionate about our work.

The stated aim of the Endocrine Nurse Award is 'To recognise individuals who have demonstrated innovative and successful nurse-led initiatives in the endocrine field that have advanced best practice in patient care, education or research.' Remember that this could be you! The Society for Endocrinology is here to support us with many opportunities to help us on our journey.

Thank you to all who believed in me and helped me develop as an Endocrine Specialist Nurse.

ALISON MILNE
Endocrine Specialist Nurse, Aberdeen Royal Infirmary, NHS Grampian

Alison Milne (centre) pictured with colleagues. ©A Milne

For male hypogonadism with confirmed testosterone deficiency[1]

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Tostran® (testosterone) 2% Gel Prescribing Information
Please refer to the full Summary of Product Characteristics before prescribing.
Presentation: Tostran 2% Gel, contains testosterone, 20 mg/g. **Indication:** Testosterone replacement therapy for male hypogonadism when testosterone deficiency has been confirmed by clinical features and biochemical tests. **Dose:** The starting dose is 3 g gel (60 mg testosterone) applied once daily to clean, dry, intact skin, on the abdomen or to both inner thighs. Adjust dose according to clinical and laboratory responses. Do not exceed 4 g of gel (80 mg testosterone) daily. Apply after washing, bathing or showering. Do not apply to the genitals. Do not use in women, or children under the age of 18 years. **Contraindications:** Known or suspected carcinoma of the breast or the prostate; hypersensitivity to any of the ingredients. **Special warnings and precautions for use:** Not to be used to treat non-specific symptoms suggestive of hypogonadism if testosterone deficiency has not been demonstrated and if other aetiologies have not been excluded. Not indicated for treatment of male sterility or impotence. Monitor testosterone at regular intervals. Adjust dose to maintain eugonadal testosterone level. Experience in patients over 65 years is limited; account for lower serum testosterone with increasing age. Pre-examine all patients to exclude a risk of pre-existing prostatic cancer. Perform regular monitoring of breast and prostate. Androgens may accelerate the development of subclinical prostatic cancer and benign prostatic hyperplasia. Use with caution in thrombophilia due to risk of thrombosis. Monitor haemoglobin, and haematocrit, liver function tests and lipid profile during long-term use. Oedema with/without congestive heart failure may be a severe complication in patients with pre-existing severe cardiac, renal, or hepatic insufficiency, or ischaemic heart disease. Discontinue immediately if such complications occur. Use with caution in hypertension, epilepsy, migraine and sleep apnoea as these conditions may be aggravated. Care should be taken with skeletal metastases due to risk of hypercalcaemia/hypercalciuria. Androgen treatment may result in improved insulin sensitivity. Inform the patient about the risk of testosterone transfer and give safety instructions. Health professionals/carers should use disposable gloves resistant to alcohols. **Side-effects:** *Very common:* Application site reactions (including paraesthesia, xerosis, pruritis, rash or erythema). *Common:* Increased haemoglobin, red blood cell count, and haematocrit. Increased male pattern hair distribution. Hypertension, gynaecomastia, peripheral oedema, and increased PSA. May cause irritation and dry skin. Prescribers should consult the summary of product characteristics for further details of side effects. **Legal Category:** POM. **Further Information is available from the Marketing Authorisation Holder:** Kyowa Kirin Ltd, Galabank Business Park, Galashiels, TD1 1QH, UK. **Date of Prescribing Information:** March 2019.

For the United Kingdom: Pack Size and Price: Pack contains one 60 g metered-dose canister. Price £28.63. **Marketing Authorisation Number:** PL16508/0025.

Adverse Events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard.
Adverse events should also be reported to Kyowa Kirin Ltd on +44 (0)1896 664000, email medinfo@kyowakirin.com

References: 1. Tostran 2% Gel SPC. 2. Data on file.

UK/M015/0584. Date of preparation: July 2019

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